



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,280	12/15/2003	Lin Lin	38898-0054	1770

7590 03/10/2006

Mr. William B. Vass  
c/o Ridout & Maybee LLP  
Suite 2400  
One Queen Street East  
Toronto, ON M5C 3B1  
CANADA

EXAMINER

CHOI, WOO H

ART UNIT

PAPER NUMBER

2189

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/734,280	<b>Applicant(s)</b> LIN ET AL.	
	<b>Examiner</b> Woo H. Choi	<b>Art Unit</b> 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9,10 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 – 7 and 11 – 16, drawn to a flash memory device with blocks for meta data and blocks for non-meta data, classified in class 711, subclass 103.
  - II. Claims 9 – 10 and 17 – 20, drawn to memory device for multi-media and non multi-media storage, classified in class 711, subclass 173.
2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as multi-media storage. See MPEP § 806.05(d).
3. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Fraser Rowand on March 2, 2006, a provisional election was made without traverse to prosecute the invention of I, claims 1 – 7 and 11 – 16. Affirmation of this election must be made by applicant in replying to this Office action. Claims

Art Unit: 2189

9 – 10 and 17 – 20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 5 – 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2189

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 – 8 and 11 - 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Soemo *et al.* (US Patent Application Publication No. 2003/0078907, hereinafter “Soemo”).

With respect to claims 1, 4, 5, 11 and 14, Soemo discloses a memory device (figure 3) for storing data, said data including metadata, said memory device comprising:

a static volume comprising a plurality of static blocks (figure 3, static table file 49 + 38A), and each of said static blocks comprising a plurality of sectors (flash memories are organized as a collection of sectors that form an erase block);

a dynamic volume comprising a plurality of dynamic blocks (figure 3, dynamic table file 49 + 38B), and each of said dynamic blocks comprising a plurality of sectors;

each of said dynamic blocks having one of said sectors allocated for writing and reading metadata (49), and said remaining sectors (38B) in said dynamic block being available for writing and reading data; and

each of said static blocks having one or more sectors for writing and reading metadata (49), said remaining sectors (38A) in said static block being available for writing and reading data.

Art Unit: 2189

9. With respect to claims 2, 3, 6, 7, 12, 13, 15 and 16, erasability and movability of flash memory blocks are inherent features of flash memories.

10. Claims 1 – 8 and 11 - 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Parker (US Patent No. 6,535,949).

11. With respect to claims 1, 4, 5, 11 and 14, Parker discloses a memory device (figure 1, 24) for storing data, said data including metadata, said memory device comprising:

a static volume comprising a plurality of static blocks (col. 11, lines 7 – 17), and each of said static blocks comprising a plurality of sectors (figure 3);

a dynamic volume comprising a plurality of dynamic blocks (col. 11, lines 7 – 17), and each of said dynamic blocks comprising a plurality of sectors (figure 3);

each of said dynamic blocks having one of said sectors allocated for writing and reading metadata (figure 4, 56), and said remaining sectors in said dynamic block being available for writing and reading data; and

each of said static blocks having one or more sectors for writing and reading metadata (56), said remaining sectors in said static block being available for writing and reading data.

12. With respect to claims 2, 3, 6, 7, 12, 13, 15 and 16, erasability and movability of flash memory blocks are inherent features of flash memories and are also explicitly disclosed by Parker (col. 10, lines 45 – 49).


Art Unit: 2189

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Woo H. Choi  
March 3, 2006